Joint Event with the University of Huddersfield

MODERN VIBRATION ANALYSIS AND CORRECTION PRACTICES

Tuesday 6 March 2007 from 7 p. m.

SPEAKER: Dr Crinela Pislaru

School of Computing & Engineering, University of Huddersfield

The Engineering Control and Machine Performance (ECMP) research group within Centre for Precision Technologies has achieved an excellent world-leading expertise due to its extensive research work in the area of machine tool precision accuracy. Comprehensive knowledge of machine tool error measurement, avoidance, correction and compensation techniques has been gained due to research activities included in the previous successful industrial and EPSRC projects. One of the research directions is modelling and analysis of machining processes with the focus on quantifying and optimising the performance of a CNC machine tool under cutting conditions, through investigating those parameters that affect dimension, form, and surface finish tolerances.
ECMP group has developed efficient procedures for ***theoretical and experimental modal analysis*** and ***Wavelet Transform*** was used successfully for the first time to estimate the modal parameters of the CNC machine tool feed drives.
Crinela will also present the results of studies and practical applications of ***passive and active vibration control strategies*** applied to CNC machine tools. The relation between tool wear, machining dynamics, chatter analysis and surface metrology has been used to provide correction and ***condition monitoring*** data. In this way the industry requirements for accuracy of manufacture and the suitability of the components and products for its intended function could be fulfilled.

Come along and listen to her views.

Biography: Crinela Pislaru was employed as Research Assistant / Fellow at the University of Huddersfield since 1998. After she gained a PhD in Control Engineering in 2001, she became co-investigator to two projects funded by the EPSRC and worked on a DTI Knowledge Transfer Network. Crinela has 14 years experience in academic environment and her major research interests are in modelling, analysis, monitoring and control of machining processes for manufacturing automation. Crinela is a competent lecturer and high calibre researcher with broad up-to-date experience on modal parameter identification, control theory applied to positioning systems and machine tools, metal cutting mechanics, machine tool vibrations, precision machining, feed drive modelling and analysis, intelligent machine tools, sensors and actuators.

ALL STUDENTS ARE WELCOME TO THIS FREE EVENT

VENUE: **ROOM CWS - 10, CANAL WEST SIDE BUILDING, UNIVERSITY OF HUDDERSFIELD, QUEENSGATE, HUDDERSFIELD HD1 3DH**

FOOD AND DRINKS WILL PRECEDE LECTURE **6.30 PM FOR 7 PM**

To register your attendance to this *free* event contact Dr. Zhijie Xu on 01484 472156, fax on 01484 47 2413, or email: z.xu@hud.ac.uk with names of delegates.